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VOCATIONAL SCHOOLS and the WAR

Some of the Many Contributions to the War by the Nation's Vocational Schools

AMERICAN VOCATIONAL ASSOCIATION, INC.

American Vocational Association, Inc.

1010 Vermont Ave., N. W., Washington, D. C.

★ ★ ★

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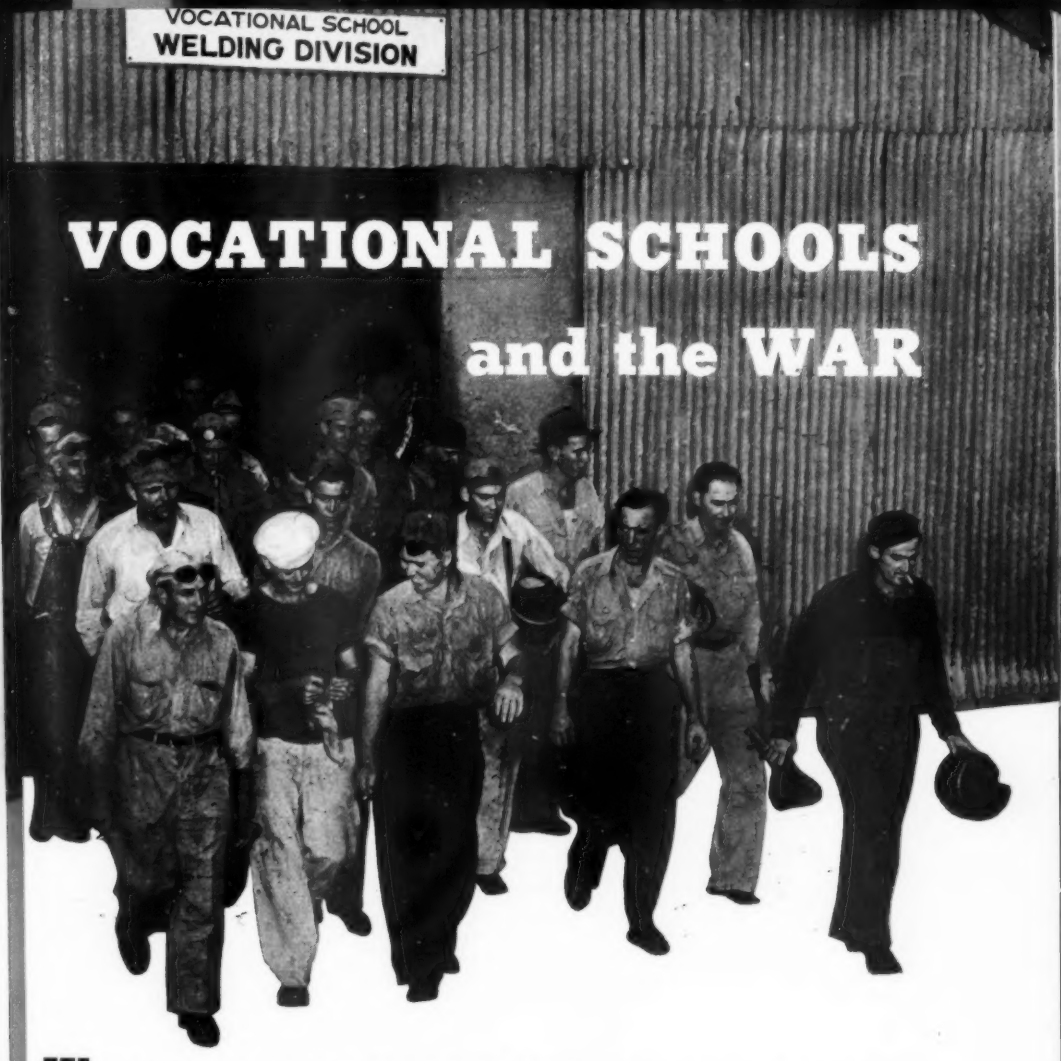
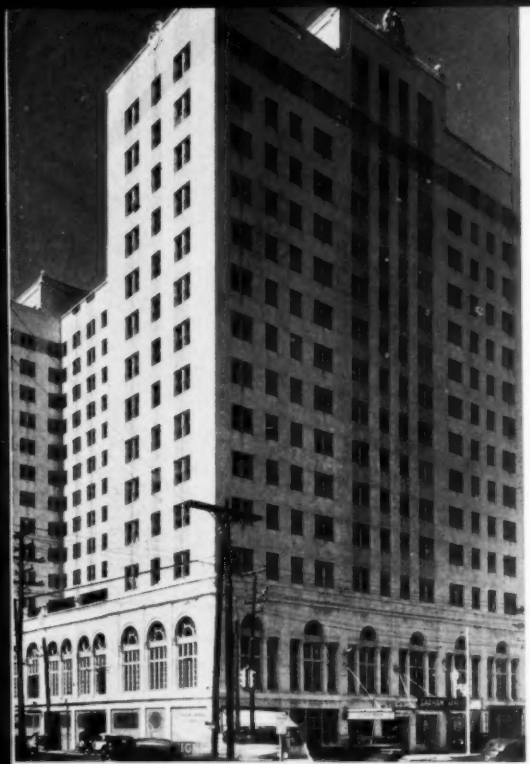


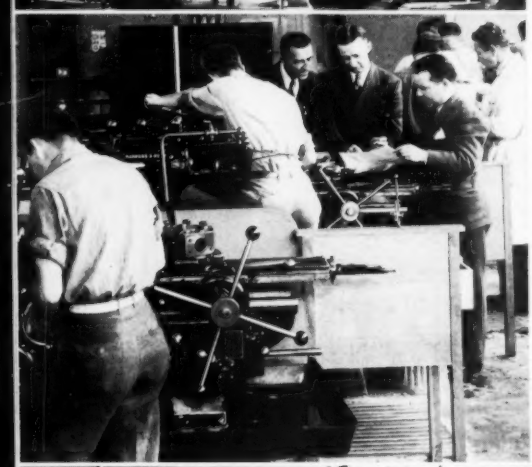
VOCATIONAL SCHOOLS and the WAR

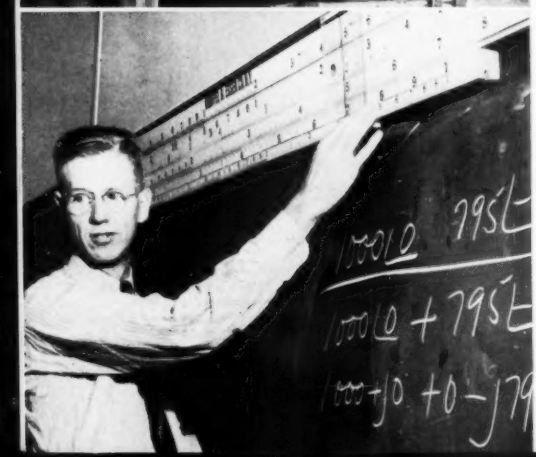
WAR has brought out in bold relief the critical importance of the lathe operator, the farmer, the engine mechanic, the housewife, the assembly line worker—all of the men and women who are producing the necessities of war. When victory comes, the men and women in overalls can occupy their rightful place with the men and women in uniform as those who have given their strength and sweat for the cause of democracy.

Vocational education is the medium through which millions of these soldiers of the production lines have learned to discipline their minds and hands so that we have more and better food and our weapons of war are faster, tougher, more maneuverable, and have fire power superior to Axis equipment.

Vocational Education comprises the teachers, the administrators, the coordinators, the janitors and the tool-crib attendants, as well as the representatives of labor and management. Whatever of lasting benefit has come through vocational schools in this war is a tribute to these men and women. They have given from their rich experience without stint or reservation.







VOCATIONAL War Production Training

THREE LEVELS of authority are provided in the administration of the program of Vocational Training for War Production Workers and the program of Rural War Production Training, the two Federally financed programs through which the Nation's vocational schools have made a major contribution to the war:

1. United States Office of Education—sets broad training policy in line with the national manpower program.

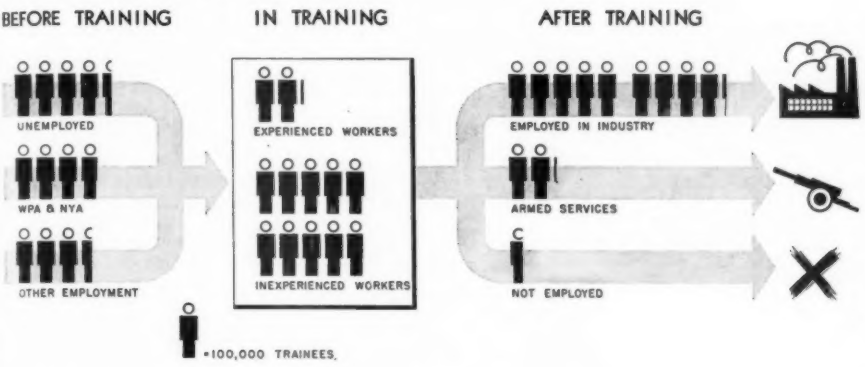
2. State Boards for Vocational Education—administer details of training programs within their respective States according to regulations of the U. S. Office of Education, and cooperate actively with State divisions of the United States Employment Service and representative Advisory Committees.

3. Local Boards of Education—set up classes, hire teachers, adapt training to specific requirements, cooperate actively with local and area offices of the U. S. Employment Service, obtain counsel and guidance of local representative Advisory Committees.

SHACKS TO SKYSCRAPERS—The top picture at the left and the one on the preceding page show extremes in vocational school housing for War Production Training classes. Originally built as a winter resort hotel, eight floors of the unfinished building were converted for use as regular vocational and war production worker training quarters under the local board of education. Several additional floors are to be equipped for vocational hotel service training. The middle picture at the left shows an Advisory Committee composed of representatives of management, labor and vocational education, visiting a war production worker training class. Bottom, an experienced industrial worker trained as a vocational teacher

Vocational Training for War Production Workers

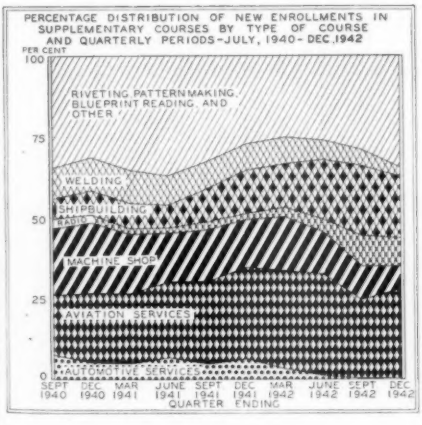
CHARACTERISTICS OF TRAINEES—July 1940 to June 1942

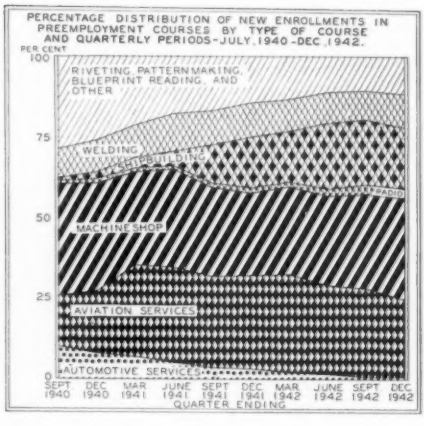


THE OBJECTIVE of Vocational Training for War Production Workers is the immediate employability of the trainee for a specific job in a specific war industry and with increasing frequency in a specific plant.

In a large number of instances new workers, that is, **workers new to industrial employment**—housewives, salespersons, bellboys, domestic workers—are receiving specific instruction in occupations essential to war production. In other situations—not so frequent as it has been in the past—workers employed on mechanical jobs in civilian production are being given "conversion training" for jobs in war industry. Finally, a large group of workers are attending vocational schools during their out-of-work hours for the purpose of improving their present skills or "upgrading" themselves to better jobs.

Trainees are placed in the **preemployment** classification if they are available for employment in a war industry occupation. However, if the workers are taking training and are already on a war industry payroll in an essential occupation they are classified as **supplementary** trainees.





ENROLLMENTS BY STATES

Vocational Training for War Production Workers

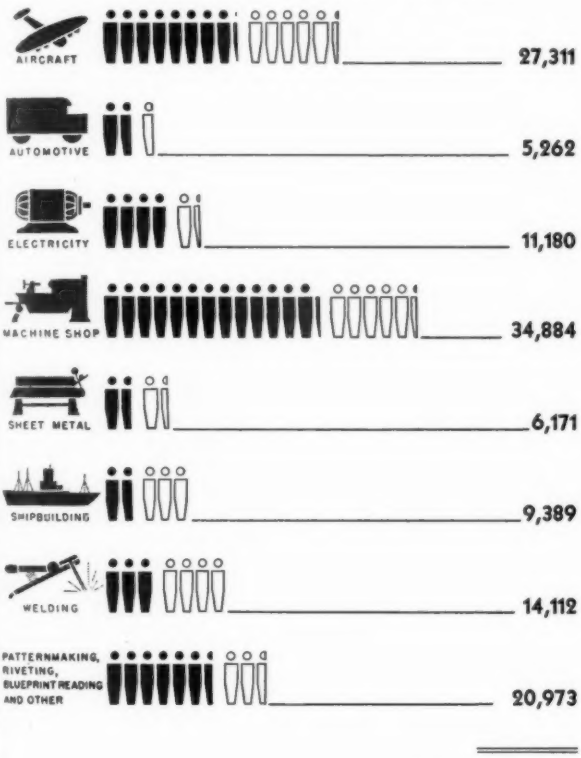
Cumulative Totals July 1940 to December 1942

EQUIPMENT FOR TRAINING

LOCAL school shops contain equipment—lathes, welding machines, rivet guns—similar if not identical to the equipment which the trainee will operate on his job in the plant. The States and local communities have purchased from their own funds the largest share of the equipment used in the training program. In a number of instances, however, Federal funds have been utilized to acquire equipment unavailable in the local school shop but required to meet an urgent training need for war industry.

TRAINING STATIONS BY TYPE OF SHOP

VOCATIONAL TRAINING FOR WAR PRODUCTION WORKERS

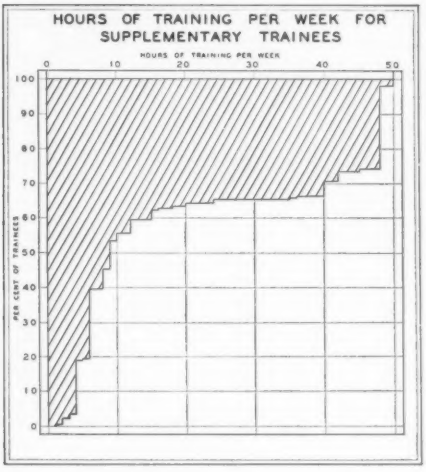


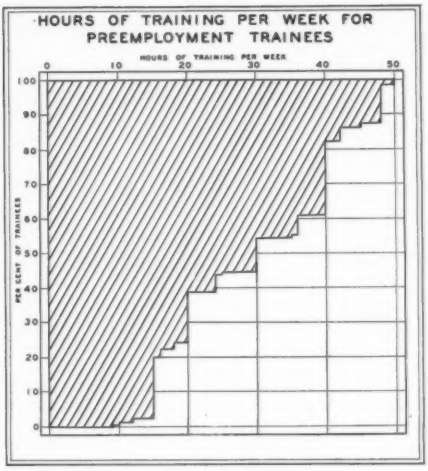
TRAINING PAYS

AS THE war production training program has evolved, war contractors are increasingly realizing that systematic and specific training in the public vocational schools is superior to "pick-up" or "hit-or-miss" methods of learning a skill on the job. War contractors have found, to quote a typical judgment from a large employer, that—

"several weeks' time in 'training on the job' is saved when an employee has had pre-training in the public schools."

The realization that vocational training pays has been demonstrated by employers in a very practical fashion. Growing numbers of employers are taking new workers on their payrolls and assigning them to full time attendance in the public vocational schools. In this way the training which these "paid" trainees are receiving is directly related to the work which they will be doing in the plant. In all instances this arrangement is the outcome of joint determination between the public schools and representatives of the employers with regard to the jobs which the trainees will be performing in the plant, the skills and related background knowledge required for the jobs, the machines and tools to be used, and safety factors to be observed.





In many instances employers lend plant equipment and tools to the vocational schools in order to reproduce actual working conditions as closely as possible. In still other instances, at a later stage in the course of instruction, trainees will be engaged in producing parts or in assembly work of the kind they will encounter in the plant.

In a very real sense, the public vocational schools are "processing" new workers so that the adjustment to plant working conditions will be greatly facilitated.

Here is the testimony of one of the largest aircraft manufacturers in the country:

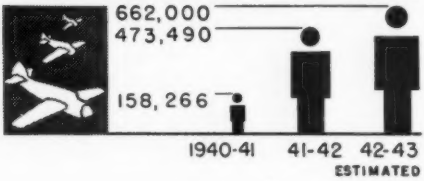
"At the present time practically all of our new hires are being trained in paid pre-factory training classes operated for us by the War Production Training Program of the public vocational schools. This program is proving highly effective in meeting our needs."

WOMEN TRAINEES have formed a constantly increasing proportion of enrollees in the war production training program as the ranks of male workers have been depleted by requirements of the Armed Forces. The public vocational school training program has demonstrated that women are fully adaptable to requirements of the large majority of occupations in war industries. The housewife, the domestic worker, the beauty shop operator—all deserve great tribute for the speed with which they have acquired new skills.

Women Trained	1940-41	1941-42	1942-43	Total
	2,818	97,545	681,000 (Est.)	781,363

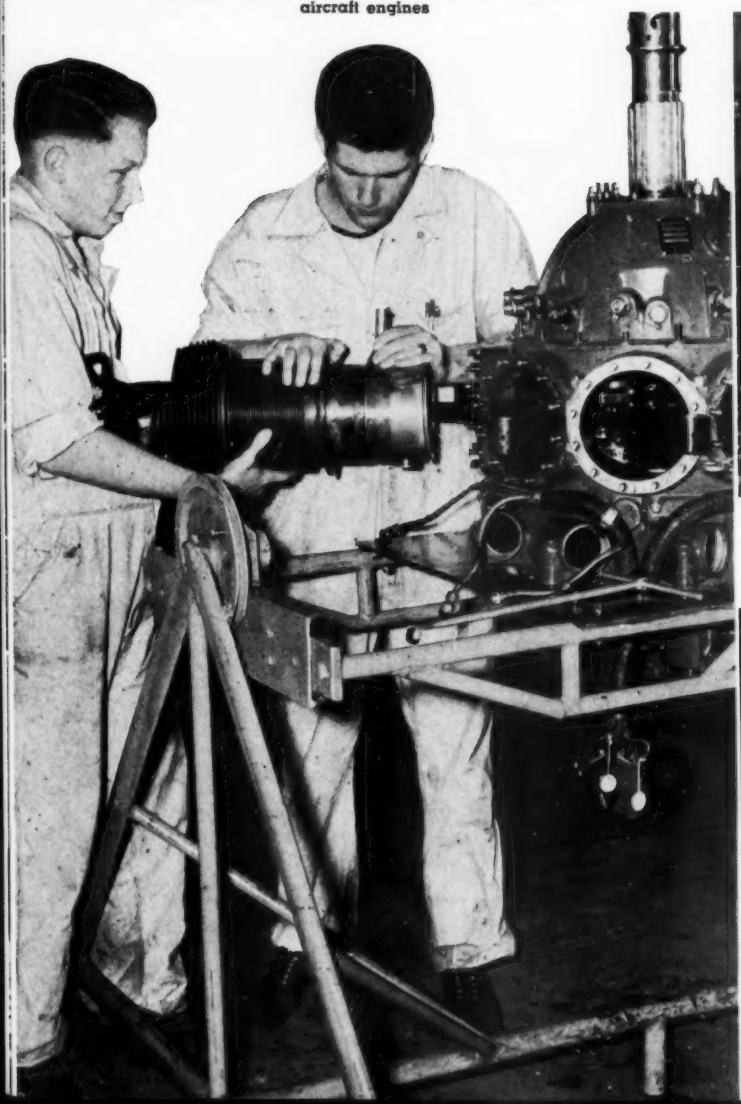
AVIATION

WAR PRODUCTION TRAINEES



OUR aircraft industry has reached heights in this war which previously would have seemed impossible. Production today is many times as large as in the period immediately preceding Pearl Harbor. This enormous expansion in a short time has meant a correspondingly large expansion in employment. The vocational schools have contributed much to make this growth possible. Let a large aircraft manufacturer speak for himself: **"The training program of the public vocational schools has been a definite factor in making possible the production record attained by this company during the past two years."**

Learning specific jobs in the assembly of radial aircraft engines



Experience on instrument ass arning pa

Preparing riveting practice p

IN the great centers of aircraft construction the training program has at times literally taxed the capacity of the schools. In some aircraft centers the training program has overflowed into basements, garages, stores, warehouses. In numerous training centers school boards have constructed new buildings and leased factory type structures for training purposes. The vocational schools in many centers where there is no aviation industry have trained thousands of men and women for work in other communities.

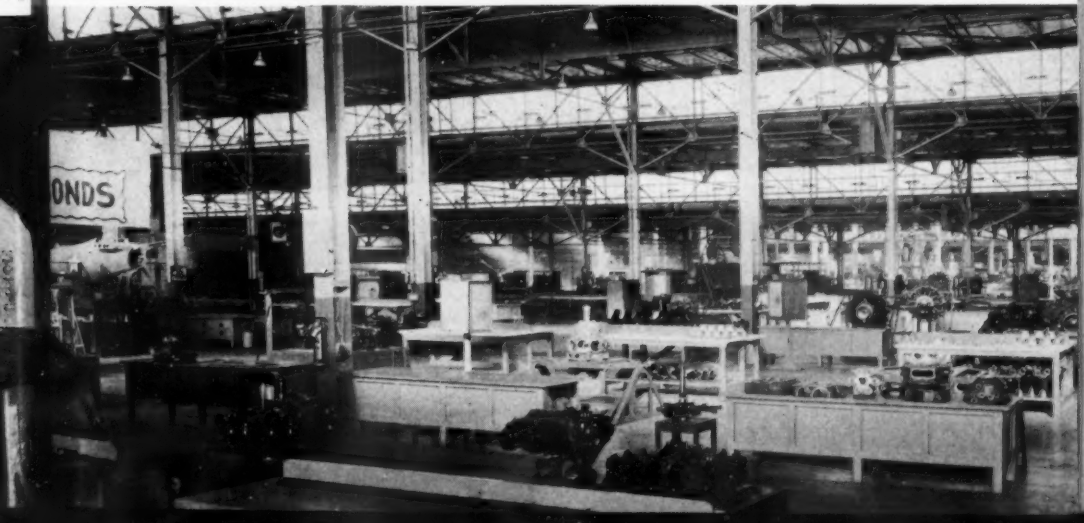
Riveting practice

arning parachute making

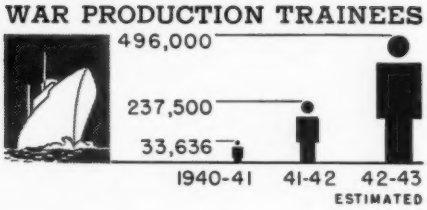
Acquiring skill in forming sheetmetal

Practice in gas tank patching

Engine repair section in a vocational school cooperating with the Army Air Service Command



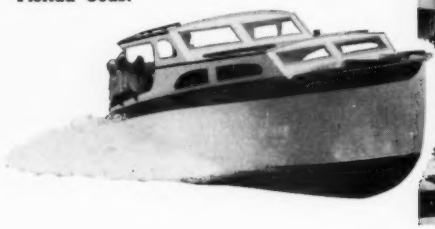
SHIPBUILDING



THE emergency period has seen the rise of the shipbuilding industry almost from the ground up. Our vocational schools have answered the call for more and still more trained workers—speedily and efficiently. The contribution of the schools in the program has penetrated to every skilled and semi-skilled job in the range of shipbuilding occupations. States the officer in charge of training at a Navy Yard: **"Vocational school training has made it possible for us to keep pace with the high requirements imposed by this all-out war effort."**

First Liberty Ship launching to honor Vocational War Production Training Prog a Pacific Coast shipbuilding cente

The small boat below, within two weeks of completion in a vocational school shop, saved the lives of 200 off the Florida Coast

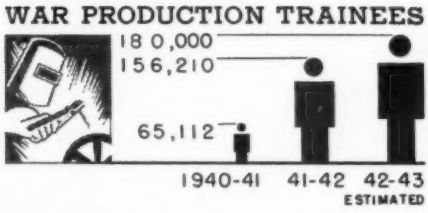


Training in the building of small boa

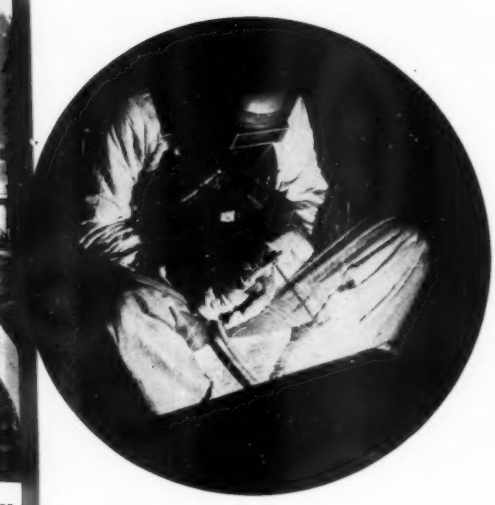
Where the ship's blueprints become full-sized patterns—A mold loft class in action

Gas weldi

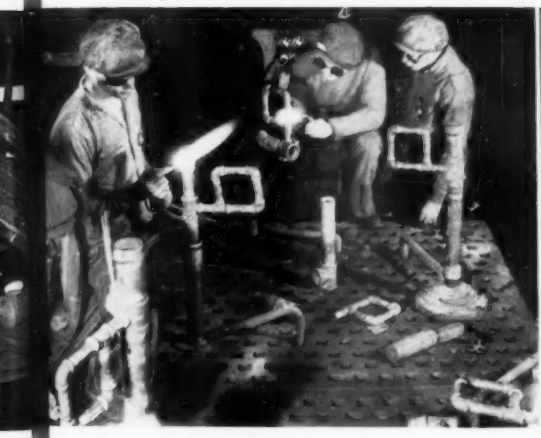
WELDING



WELDING makes speed in production, strength of parts, and the saving of critical materials. On the training of welders in vocational schools the manager of a steel company reports: **"60 per cent of our welders received preliminary training in local vocational schools. Had it not been for this program it would have been impossible for us to man this Yard."**



Speed and strength



Learning silver brazing for Naval ship construction

Instruction in operation of gas cutting machine

Gas welding of pipe

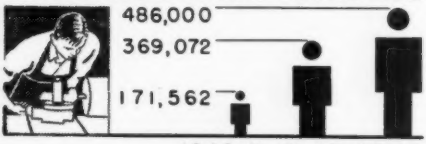
Trainees acquire skill on many types of welds

Training in arc welding

12

MACHINE SHOP

WAR PRODUCTION TRAINEES



THE machine tool is the heart of modern industry. It is a power driven tool that cuts and shapes various metals. It does this by turning, drilling, planing, milling, or grinding. The preparation of every metal object that has to be worked to exact specifications depends on the proficiency of the workers who operate the metal working machines.

Women trainees and older teachers are increasing in nu

Learning precision work on the surface grinder

Safety instruction in a machine tool operation

Production experience on the turret lathe

Women can perform heavy duty lathe operation

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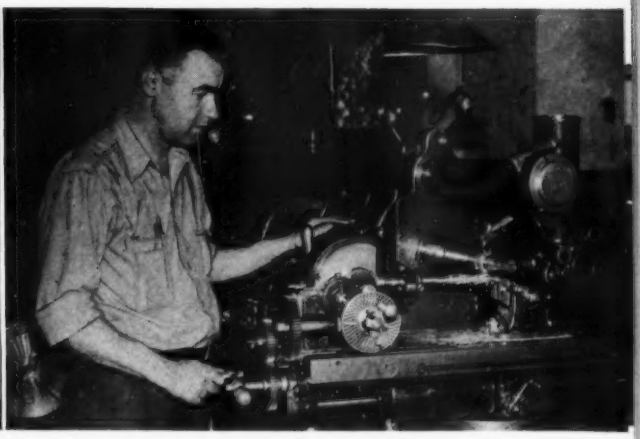
Age is no

MORE than a million workers now engaged in crucial machine tool jobs acquired their basic skills in the Nation's vocational schools and departments. The vocational schools have served not only as a source for beginning machine operators but have, as well, provided the training for machine operators in the higher brackets of skill, seeking to advance themselves to jobs in the machine shop requiring an even higher order of skill.

Here is a large employer of machine operators speaking: **"Had it not been for the help which we received from your vocational school, it is very questionable whether we could have successfully built up our war production in the time which it has taken."**

Demonstrating effective use of automatic feeds

m valet to machine operator via training



Machining a reamer for school shop use

Age is no bar to unusual lathe set-ups

Industrial working conditions prevail in school shops

CIVILIAN TRAINING
For Army and Navy

HUNDRED OF THOUSANDS of civilians, recruited by the U. S. Civil Service Commission, work in Army and Navy Arsenals, Ordnance Plants, Yards, and Air Depots. Many received their training through the vocational schools, as part of their job. The commandant of a Naval Air Station declares: **"The vocational program is essential to the proper functioning of this station . . . to meet our expanding requirements and to supplement the in-service training of mechanics and learners in the Naval Air Station's shops."**

Pra
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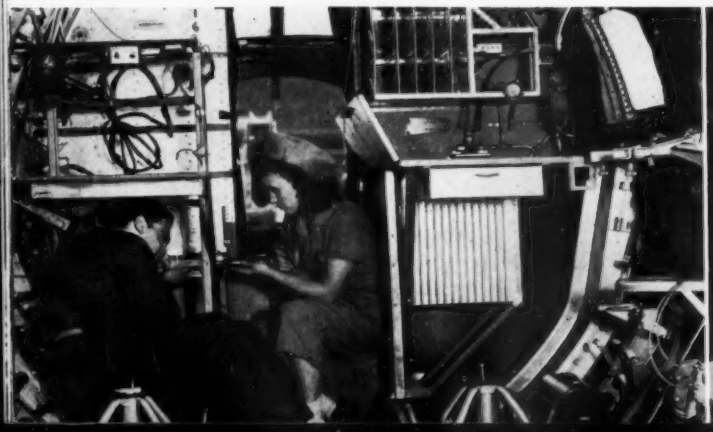
Instruction in radio maintenance and repair for the Signal Corps

Installing electrical wiring on aircraft assemblies



Learning Ordnance precision inspe

Learning

PRODUCTION

"LEARN BY DOING" is an accepted principle of all education. Vocational Training for War Production workers gives concrete application to this principle by eventually putting the trainee on production of the kind he will encounter on the job. It has proved invaluable in preparing the trainee for industrial employment. Although the training values are primary, the output has been of real importance in obtaining a supply of shortage items.

The manager of a large machine tool company says, **"Our subcontractors have taken advantage of the facilities in the vocational school for many operations which they were unable to handle in their own plants due to the existence of various bottlenecks."**

Production planing of precision "V" blocks

Strategic war products are made in school-plant training programs

Learning by producing on the punch press

Demonstrating production inspection work

8 MILLION TRAINEES

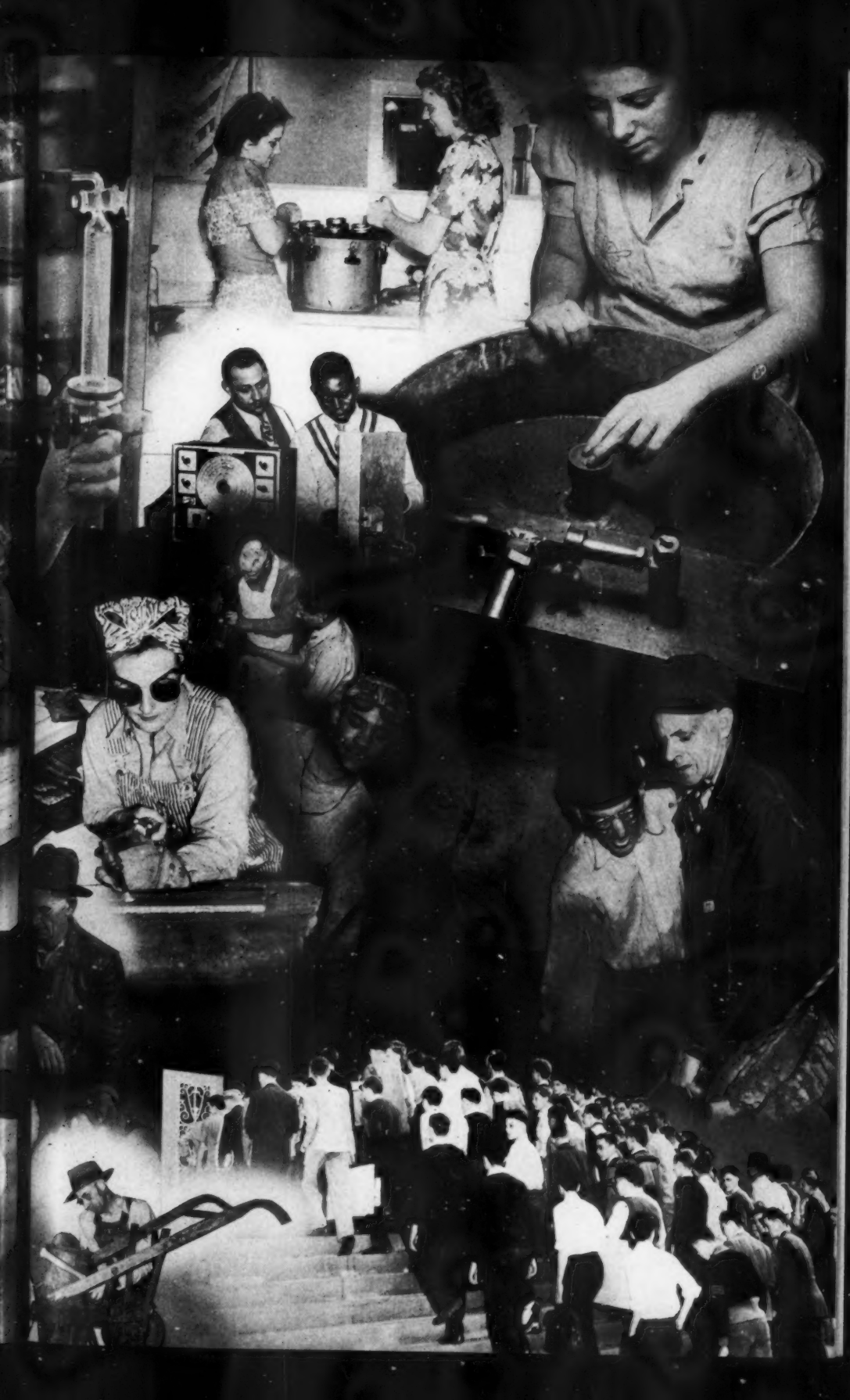
3-YEAR CONTRIBUTIONS TO THE WAR EFFORT:

Vocational Training for War Production Workers July 1, 1940-June 30, 1943	**5,106,000**
Rural War Production Training Program Dec. 1, 1940-June 30, 1943	**1,008,000**

1-YEAR CONTRIBUTION TO THE WAR EFFORT:

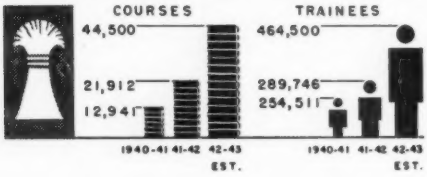
Regular Public Vocational School Program—All-Day, Part-time, Evening, 1941-42	**2,629,000***
	8,743,000

* Includes many now serving in the mechanized military forces. Additional 1942-43 figures not yet available.



RURAL

WAR PRODUCTION TRAINING



VOCATIONAL AGRICULTURE is waging a winning fight on the Food for Victory front. Funds provided by Congress started a National Defense Out-of-School Rural Youth Training Program (OSY) in December 1940. Actual war brought an expansion in this program which made instruction for emergency farm problems available to hundreds of thousands of adult members of farm families. Rural War Production Training (OSYA) courses now are in operation in 9,000 centers in 2,325 of the 3,070 counties in the United States, and in 95 centers in Hawaii and Puerto Rico. Trainees are truly "growing weapons for Victory."

Number of Courses and Enrollments*

December 1, 1940 to April 1, 1943

Type of course	*Number of Courses*	*Cumulative Enrollments*
Shop Courses	**38,616**	**569,806**
Farm Machinery	**12,513**	**135,280**
Commodity Production	**12,241**	**151,622**
Food for Farm Families	**5,549**	**53,395**
Farm Worker Training	**163**	**2,890**
Specific preemployment training	**1,237**	**32,930**
Totals	**70,319**	**945,923**

* Actual enrollments are larger than shown because there is approximately a 60-day delay in reporting the number of trainees following receipt of approved courses in the U. S. Office of Education.

The peanut harvester

Farm Worker Training

THE critical need for seasonal and year-round farm workers is being met in part through practical training for general and specific farm jobs. Short, intensive courses in general farming, dairying, production and harvesting methods, sheep shearing and the like are offered to potential workers recruited from local as well as distant areas. The program expanded rapidly during the Spring of 1943.

On-the-job training in tractor operation

Trainee learns machine adjustment in the field

FARM MACHINERY REPAIR

FARMING has become increasingly mechanized in recent years. Much of the existing farm machinery and equipment cannot now be replaced and therefore is almost priceless. Reconditioning and repair are necessary to maintain production. Nearly two million pieces of farm equipment have been reconditioned in vocational agriculture shops. The increase in value of repaired pieces is conservatively estimated at $10,516,250. Instruction has included the repair and adjustment of machinery in the field.

Reconditioning through welding

Practical training increases life of equipment

Learning to keep farm vehicles in operation

mers have learned to make many minor repairs

A typical farm machinery repair center

FOOD PRODUCTION

Food for Farm Families

THE importance of an adequate and balanced diet for all the people is so widely recognized that farm families are fully aware of the need for the production, conservation, and processing of food for home consumption. Such food for farm families releases commercially-grown and processed food for use by the military forces, industrial workers, and our Allies. To aid this effort, special instruction has been provided through Rural War Production Training to more than 53,000 persons.

Farm Commodities

TO aid farmers in making and carying out their plans for the attainment of increased production goals to meet wartime needs, thirteen types of courses are provided in the production of farm commodities. Instruction emphasizes the efficient use of labor and materials in an effort to obtain greater production per farm. The interest displayed by the 151,622 enrolled in 12,241 courses indicates that farmers generally are doing their share in the nation-wide Food for Victory campaign.

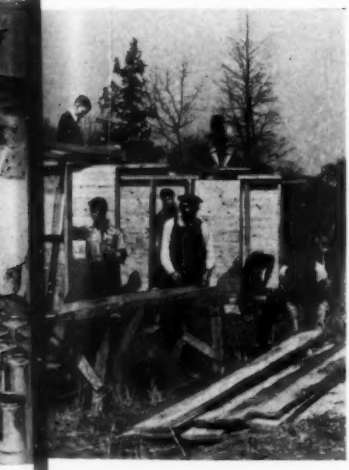
Developing farm gardens

Learning dehydration in school

Instruction in food proc

School officials, teachers, and trainees work for increased production of farm commodities

SHOP COURSES



working instruction (top), wood-
onstruction (above), tractor, truck,
uto repair and operation (below)

RURAL WAR PRODUCTION TRAINING

Courses and Cumulative Enrollments by States
December 1, 1940
to April 1, 1943

State	Number of Courses	Cumulative Enrollment
Alabama	3588	43,841
Arizona	392	2,346
Arkansas	2427	29,391
California	966	14,864
Colorado	395	5,395
Connecticut	19	297
Delaware	53	1,124
Florida	2179	27,390
Georgia	4118	48,155
Idaho	298	3,643
Illinois	1817	19,750
Indiana	589	10,247
Iowa	714	11,656
Kansas	719	9,406
Kentucky	3730	49,209
Louisiana	3764	43,399
Maine	303	4,449
Maryland	612	9,456
Massachusetts	94	1,406
Michigan	1130	14,215
Minnesota	1564	16,877
Mississippi	8630	86,250
Missouri	1877	25,637
Montana	318	4,537
Nebraska	310	4,872
Nevada	80	1,223
New Hampshire	126	1,637
New Jersey	178	3,340
New Mexico	159	2,851
New York	967	13,994
North Carolina	4316	55,349
North Dakota	388	6,263
Ohio	998	18,985
Oklahoma	2566	37,527
Oregon	450	6,027
Pennsylvania	1351	20,500
Rhode Island	3	90
South Carolina	2374	42,811
South Dakota	122	1,934
Tennessee	2694	46,972
Texas	6471	101,100
Utah	458	7,011
Virginia	1207	19,469
Vermont	246	3,252
Washington	418	6,821
West Virginia	1443	18,311
Wisconsin	1683	26,662
Wyoming	146	2,410
Dist. of Columbia	23	1,210
Hawaii	71	1,105
Puerto Rico	775	11,257
TOTALS	70,319	945,923

The Regular Vocational Program Contributes to the War

HOME ECONOMICS EDUCATION

MORE than one million adult and young homemakers are being assisted in making a valuable home front contribution to the war through the all-day and adult homemaking education programs in vocational home economics.

In 1942 there was an increase of 9 per cent over the previous year in enrollments for all types of instruction. The war has brought a significant change in emphasis for home economics instruction, especially in the adult field where enrollments increased almost 19 per cent in 1942. Many teachers have attended refresher courses to make their instruction more effective.

Teachers of home economics and their pupils are increasing activities in the growth and conservation of the family food supply; applying standards of good nutrition in the home; repairing and conserving clothing, furniture, and household implements; improving home management; studying child care, home nursing, and first aid; and providing an expanded community service in which homemakers are assisted in rationing and other home management problems.

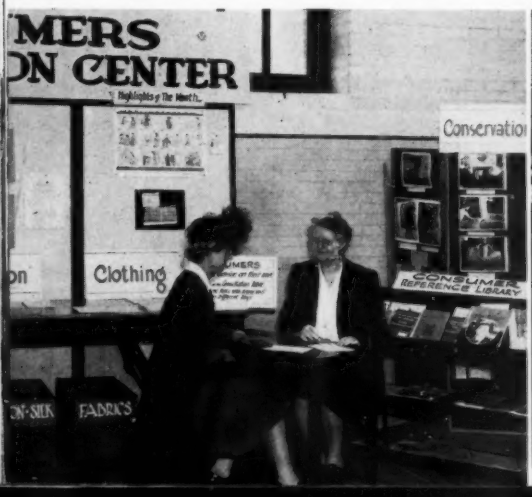
High school girls from homes where mothers are engaged in war production work are among those being trained to take over a large part of the operation of their homes.

Many home economics departments are kept open on Saturdays and many teachers will continue their work through the Summer. In 1942 more than 60 per cent of the teachers were employed beyond the regular term. Of these, 54 per cent worked from one to four weeks and 10 per cent worked sixteen or more weeks.

The increased wartime service by home economics teachers has been made available through the regular vocational program in Home Economics.

Food conservation practice

Assisting homemakers with their wartime problems



Demonstrating home care of the sick

Training in food management

Learning to care for children

Experience in caring for clothing

Conservation through reconditioning

The Home Economics Department—A home service center for the community

TRADE AND INDUSTRIAL EDUCATION

MORE THAN 40 per cent of the nearly 850,000 persons enrolled in Smith-Hughes and George-Deen Trade and Industrial classes receive instruction in the trades that are contributing most to war production. Hence the "regular" program directly aids the war effort. These 1941-42 figures tell the story:

Trades	All-day Classes	Eve. and Part-time	Totals
Automotive	39,867	13,211	53,078
Aircraft	14,722	11,225	25,947
Shipbuilding	3,315	4,802	8,117
Metal Trades	66,132	121,288	187,420
Elect. & Radio	31,614	27,384	58,998
Other	1,179	15,702	16,881
Totals	156,829	193,612	350,441

Youth and adults acquire skills leading to war production jobs

DISTRIBUTIVE EDUCATION

WORKER turnover in the distributive and service occupations this Spring reached a new high of 140 per cent. In 1942 turnover was 50 per cent and in peacetime 25 per cent, according to a recent survey by the A.V.A. and the American Retail Federation covering a total of 399 representative retail establishments in twenty-nine of the states.

Distributive education is meeting this wartime emergency through a 4-point program of intensive training for new store workers, wartime training for experienced salespersons, business clinics for owners and managers, and wartime supervisory instructor training.

Training new retail salespersons to replace clerks who go into the Armed Forces or war industries

INDUSTRIAL ARTS EDUCATION

INSTRUCTION in the Industrial Arts is making a definite contribution to the war. It provides high school boys and girls with opportunity to acquire certain basic hand skills which aid them in the selection of further training and enables boys to achieve a more satisfactory Armed Force placement.

A direct aid to the war has been the construction of 800,000 model airplanes in 6,500 schools for instruction of members of the Armed Forces in identification of planes. Started in February 1942 under sponsorship of the U. S. Office of Education, the project will be completed next Fall.

Exploring work fields for future training

Young builders see U. S. Marines examine models

PRE-INDUCTION TRAINING

VOCATIONAL industrial schools, agricultural and industrial arts shops are giving pre-induction training to 230,000 prospective Selective Service inductees.

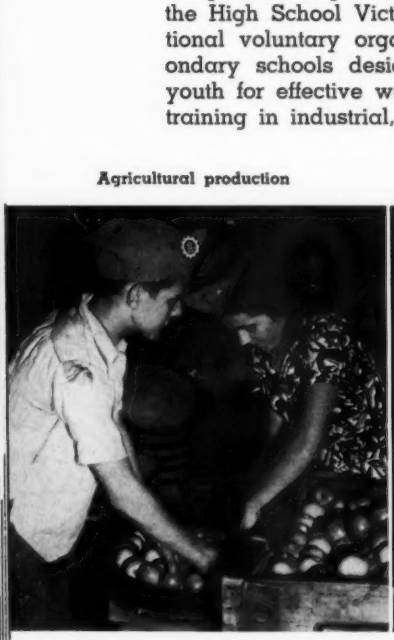
While the Navy has requested no specific pre-induction training courses as such, officials say that vocational training leads to preferred consideration for some ratings. The Army, in cooperation with the U. S. Office of Education, is publishing a series of bulletins covering vocational pre-induction training in aircraft mechanics, telephone and radio, carpentry, electricity, food service, auto mechanics, sheet-metal, and machine shop.

Many vocational courses provide training valuable for service in the Armed Forces

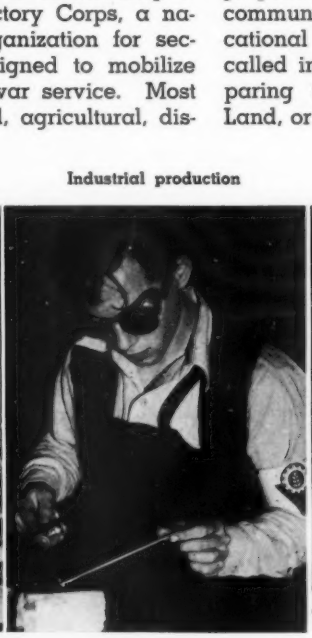
HIGH SCHOOL VICTORY CORPS

STUDENTS in vocational high schools and industrial arts classes usually are 100 per cent eligible for membership in the High School Victory Corps, a national voluntary organization for secondary schools designed to mobilize youth for effective war service. Most training in industrial, agricultural, distributive, home economics, and industrial arts education can be regarded as preparation for a war production or community service activity. Many vocational school boys who soon will be called into the Armed Forces are preparing through membership in Air, Land, or Sea Victory Corps divisions.

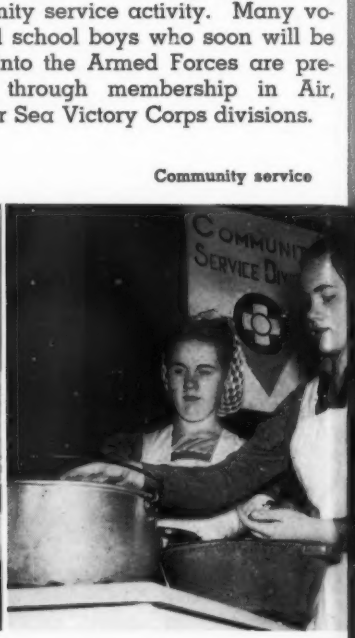
Agricultural production



Industrial production



Community service



VICTORY FARM VOLUNTEERS

VOCATIONAL EDUCATION has two distinct interests in the Victory Farm Volunteers, a movement designed to aid 500,000 urban high school youth in contributing to the war effort through summer work on farms: (1) many city vocational school boys and girls will participate, and their teachers can provide helpful guidance; (2) vocational agriculture teachers and students will be largely responsible for selecting, recruiting, and training emergency workers. The program is sponsored by the U. S. Office of Education and the U. S. Department of Agriculture. Initial experiences last Summer were valuable.

Trained youth replace seasoned workers

Urban youth respond to emergency call

FUTURE FARMERS OF AMERICA

AN outstanding contribution to the war is being made by the F.F.A., a national organization of 245,000 farm boys studying vocational agriculture in 6,000 public high schools. Chief among their 29 scheduled activities for 1943 are:

1. Producing Food for Victory, by helping meet farm production goals through expanded supervised programs.

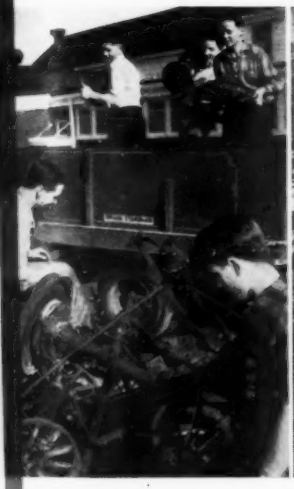
2. Salvaging Needed War Materials through group and individual activities.

3. Assisting with the Farm Labor Shortage by working longer hours and helping with farm labor training programs.

4. Repairing Farm Machinery and assisting Rural War Production Training.

5. Buying War Bonds and Stamps. Goal: $3,500,000 by October 1, 1943.

THREE former F. F. A. boys were members of the 1942 Tokyo bombing raid. Each received the Distinguished Service Cross. They were: Lt. (later Major) Travis Hoover, California; Lt. (later Captain) Robert M. Gray, Texas; and Corp. (later Staff Sergeant) Mervin Bert Jordan, Oklahoma. Captain Gray (right)



Scrap for victory

Keeping farm machinery rolling

Working longer hours

r Bond goal $3,500,000

Member projects will add greatly to wartime crop and livestock production

Vocational Education AFTER THE WAR

THE TREMENDOUS national programs of vocational training for war production—involving more than six million trainees in the public vocational schools within the past three years—attained a magnificent record because a substantial regular program of public vocational education had been developed during the preceding twenty-two years.

A post-war analysis of America's great war production training program—an effort that was developed with amazing speed—will undoubtedly reveal the great significance of the war service of the public vocational schools. All of us are, of course, exerting every effort further to speed up the war production training service. Yet we are becoming increasingly cognizant of the need for an adequate and timely occupational training plan to assist in meeting the complex post-war problems of working and living.

American wage and living standards are the highest in the world. Following the war all American industry will be in competition with the lower wage and living standards prevailing throughout the rest of the world. The business, industrial, and agricultural life of our Nation will be dependent more than ever upon skilled workers. All of this emphasizes the great need for a comprehensive and adequate vocational training program after the war.

The post-war vocational education program must be broadened in many ways. Expansion must be both vertical and horizontal. Future developments must provide for a greater variety of vocational training opportunities. Provision must be made for expanding the vocational program in the post-high school field of service, in both vocational and vocational-technical types of instruction. Undoubtedly this may involve the development of certain types of administrative units within the present school systems to make possible an area vocational-technical type of school. These schools, conducted in accordance with our present democratic system of decentralized vocational schools operated under the control of State Boards for Vocational Education and local school districts, should completely eliminate need for the separate establishment and maintenance of Federally-operated vocational training projects.

The regular vocational programs and the series of war production training services have all been developed through close cooperation which has included industrial management, labor, farmers, homemakers, and vocational educators. The post-war period will offer many additional opportunities and responsibilities through such continued cooperative effort as we plan for a more extensive and more adequate occupational adjustment service for youth and adults, including vocational rehabilitation for men injured in battle and in war production work.

Vocational educators are not looking back to the accomplishments of the past—important as this number of the A.V.A. JOURNAL shows them to be. They will improve and continue the emergency wartime program for as long as necessary. But one and all are looking forward expectantly to a newer and greater type of service—a service that will assist the Nation and its leadership to cope successfully with the many new problems to be encountered in the post-war period and the years that lie far beyond that difficult era.

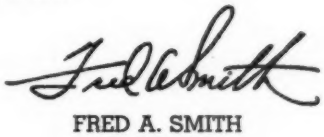
L. H. Dennis

L. H. DENNIS,
Executive Secretary
American Vocational Association

ACKNOWLEDGMENTS

THIS SPECIAL NUMBER of the A.V.A. JOURNAL on "Vocational Schools and the War" is a modest attempt of the American Vocational Association to show in brief review some of the many contributions that the Nation's public vocational schools are making to the war effort. Actual visits to the schools will reveal many additional important services which will give a much wider conception of the magnitude of the regular and emergency wartime programs of vocational education.

It is the desire of the A.V.A. Executive Committee and the Editors to express in this manner sincere appreciation for the magnificent cooperation generously given by staff members of the U. S. Office of Education and the various state and local directors, supervisors, and teachers of vocational education throughout the country, in providing much information and the many photographs used in this issue.



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• We will be pleased to send any of these texts and workbooks for 30 days on approval examination subject to our regular educational discount if retained. In this manner you can actually see for yourself how well adapted these NEW books are to your Pre-Induction program. Fill in the coupon below and send it in by return mail.

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§Note: These books have been listed in Leaflet No. 63 issued by U. S. Office of Education

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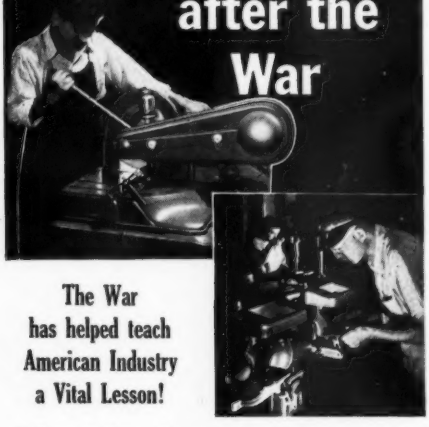

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A.V.A. MEMBERSHIP ANALYSIS

April 30, 1943

State	November 30, 1942 *	April 30, 1943		
		Individual	Life	Total
Alabama	534	580	1	581
Alaska	1	1	—	1
Arizona	74	96	—	96
Arkansas	573	553	5	558
California	841	483	17	500
Colorado	201	106	1	107
Connecticut	281	—	2	2
Delaware	114	64	1	65
Florida	839	631	1	632
Georgia	1,125	1,103	8	1,111
Hawaii	—	—	—	—
Idaho	138	84	1	85
Illinois	2,463	2,395	13	2,408
Indiana	858	624	2	626
Iowa	465	584	1	585
Kansas	264	247	5	252
Kentucky	632	520	9	529
Louisiana	196	180	2	182
Maine	31	92	2	94
Maryland	507	317	13	330
Massachusetts	1,077	880	6	886
Michigan	529	336	8	344
Minnesota	257	513	6	519
Mississippi	739	572	1	573
Missouri	647	542	3	545
Montana	105	70	—	70
Nebraska	323	260	—	260
Nevada	78	56	—	56
New Hampshire	61	28	—	28
New Jersey	616	446	60	506
New Mexico	112	—	—	—
New York	2,073	1,249	135	1,384
North Carolina	560	171	3	174
North Dakota	92	74	—	74
Ohio	1,155	1,070	13	1,083
Oklahoma	537	550	—	550
Oregon	182	260	1	261
Pennsylvania	1,344	1,905	8	1,913
Philippines	—	—	—	—
Puerto Rico	458	480	—	480
Rhode Island	34	26	—	26
South Carolina	758	657	1	658
South Dakota	105	84	—	84
Tennessee	764	795	5	800
Texas	1,127	1,014	58	1,072
Utah	128	141	—	141
Vermont	78	63	—	63
Virginia	694	493	4	497
Washington	145	134	—	134
Washington, D. C.	164	91	9	100
West Virginia	357	367	2	369
Wisconsin	1,246	911	61	972
Wyoming	103	67	—	67
Canada	1	1	—	1
Life Memberships	14†	—	14†	14†
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HOW TO RUN A LATHE—A practical 128 page operator's handbook on lathe operation and care. 360 illustrations. Written in simple, non-technical style. Price 25c.

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